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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/678,381

10/03/2003

Hyoung Jin Kim

2080-3-185

3499

35884

7590

05/21/2007

LEE, HONG, DEGERMAN, KANG & SCHMADEKA

660 S. FIGUEROA STREET

Suite 2300

LOS ANGELES, CA 90017

EXAMINER

WEISKOPF, MARIE

ART UNIT

PAPER NUMBER

3661

MAIL DATE

DELIVERY MODE

05/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/678,381	Applicant(s) KIM, HYOUNG JIN	
	Examiner Marie A. Weiskopf	Art Unit 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 9 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurabayashi (US 5,787,382).

- In regard to claims 1 and 10, a vehicle navigation method for guiding path of a complex intersection, comprising the steps of:
 - Generating a node and a link sequence from a path searching data (Column 4, lines 48-60; Column 5, lines 49-55)
 - Extracting a terminal sharing node and link by comparing the node and link sequence with a map for terminal (Column 5, lines 41-48)
 - Reconstructing a path guidance sharing node and link by comparing the node and link sequence with a map for terminal (Column 5, lines 56-65; Column 5, lines 66-70)
 - Performing a map matching and a path following in a drive state on the basis of the reconstructed data
 - Providing the followed path guidance information to a user
 - Wherein a complex intersection is an intersection having a plurality of nodes (Figure 7; Column 5, lines 41-48)

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- In regard to claims 2 and 11, wherein the path searching data is provided from at least one of an external server and a self-system (Column 3, lines 60-67; Column 4, lines 48-60)
- In regard to claims 3 and 12, wherein the reconstruction of the path guidance data is carried out by reconstructing a node and a link data of the complex intersection (Column 5, lines 49-65)
- In regard to claim 9, wherein the path guidance information is provided by at least one of on a screen and by a voice (Column 4, lines 61-67)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 7-8, 13 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurabayashi (US 5,787,382) in view of Yamashita et al (US 6,424,911).

- In regard to claims 4 and 13, Kurabayashi fails to disclose wherein the step of reconstructing the path guidance data comprises the steps of performing a grouping by using the sharing node and link of the complex intersection and patterning the grouped complex intersection, however, Yamashita et al discloses grouping of nodes and links. (Column 14, lines 1-25) It would have been obvious to one having ordinary skill in the art at the time of the invention to include the grouping by using

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sharing node and links of the complex intersection to be able to quickly and efficiently locate all the nodes and links associated with one intersection.

- In regard to claims 5-6 and 14-15, Yamashita et al i specifically disclose defining a complex intersection configuration node of a navigation numeric map and if a connectivity between the grouped nodes is secured, judging the complex intersection as a nodeset (Column 14), however, Yamashita et al does not specifically disclose grouping the extracted sharing node by using a defined intersection name attribute and each node of the complex intersection having a same name. It would have been obvious to one having ordinary skill in the art at the time of the invention to group together the complex intersection by having each node have the same attribute name in order to be able to quickly identify which nodes and links go with which complex intersection as is discussed in Yamashita et al (Column 14,lines 1-25).
- In regard to claims 7 and 16, Kurbayashi fails to disclose wherein the step of performing the grouping by using the link of the complex intersection comprises the steps of defining a complex intersection configuration link of a navigation numeric map, grouping the extracted link by using a defined intra-intersection link attribution and judging a link, which is not the intra-intersection link among the grouped links, as a connection link, however, Yamashita et al discloses this. (Column 14) It would have been obvious to one having ordinary skill in the art at the time of the invention to include the grouping by using sharing node and links of the complex intersection

to be able to quickly and efficiently locate all the nodes and links associated with one intersection.

- In regard to claims 8 and 17, Kurbayashi fails to disclose wherein patterning the grouped complex intersection comprises the steps of indexing nodes, extracting a connection angle of a connection link coupled in a progressing direction of the indexed node, integrating the complex intersection links by using the extracted connection angle and adding a special intersection attribute to the integrated complex intersection, however, Yamashita et al discloses this. (Column 17, lines 33-58) It would have been obvious to one having ordinary skill in the art at the time of the invention to include the teachings of Yamashita et al with those of Kurbayashi in order to provide an efficient system to map the complex intersection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

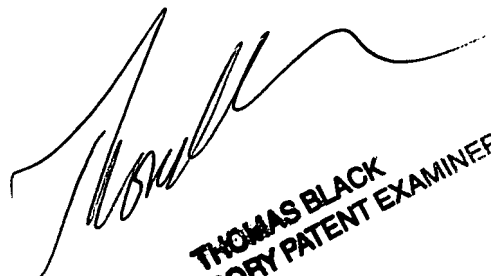
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marie A. Weiskopf whose telephone number is (571) 272-6288. The examiner can normally be reached on Monday-Thursday between 7:00 AM and 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MW



THOMAS BLACK
SUPERVISORY PATENT EXAMINER